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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/589,520

05/16/2007

Seishi Takamura

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EXAMINER

FINDLEY, CHRISTOPHER G

ART UNIT

PAPER NUMBER

2482

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/589,520	<b>Applicant(s)</b> TAKAMURA ET AL.	
	<b>Examiner</b> CHRISTOPHER FINDLEY	<b>Art Unit</b> 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9 is/are allowed.
- 6) ☒ Claim(s) 10-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/16/2006, 11/16/2006, 9/01/2010</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 101*

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. **Claims 10-13 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

Claims 10-13 recite a “lossless video coding program” and “a recording medium,” wherein the Applicant’s Specification states in paragraph [0147] on page 43:

The computer system mentioned here is assumed to include an OS and hardware such as peripheral equipment. The recording media that can be read by a computer refers to portable media such as flexible disks, magneto-optical disks, ROM, CD-ROM and so on, and recording equipment such as hard disks integrated within the computer system. **Items that can dynamically retain programs for a short time (transfer media or transfer waves) such as communication lines for transmitting the program through communication circuits such as telephone circuits or networks such as the Internet, and items that can retain programs for a fixed period of time such as volatile memory in the computer system that forms a client or server, are also included. The above-mentioned program may be meant for realizing a part of the functions mentioned above, or it may be a difference file (difference program) that can realize the functions by combining with the programs recorded already in the computer system. (emphasis added)**

Media embodied as a carrier wave or electromagnetic signal are considered non-statutory subject matter. Therefore, the claimed program and recording medium are considered to be non-statutory.

***Allowable Subject Matter***

**1. Claims 1-9 are allowed.**

The following is an examiner's statement of reasons for allowance: While the prior art of record generally disclose progressive lossless video coding methods that generate lossy base layer streams with lossless enhancement layer streams by performing video coding which allows decoding that matches an original signal comprising: a step that inputs a residual signal obtained by subtracting a prediction signal from an original signal for each block of an image signal, the prediction signal conforming to a predetermined lossy video coding scheme and being obtained by space prediction in intra-frame coding or by time prediction in inter-frame coding, and a step that determines transform coefficients obtained by applying orthogonal transformation on the residual signal and quantization coefficients obtained by quantizing the transform coefficients based on the lossy video coding scheme, the prior art of record **fails** to fairly teach or suggest a step that identifies existential space of transformed coefficients established from the quantization coefficients, and quantization parameters and quantization methods used during quantization; a validity judging step that judges whether grid points in the existential space of the transform coefficients are valid as a result of orthogonal transformation of the residual signal; an enumerating step that searches, in a predetermined grid point order, grid points for which the judgment is valid from the grid points in the existential space of the transform coefficients, and enumerates the grid points thus searched; a step that assigns serial .numbers in the order of enumeration to enumerated grid points; a step that acquires serial numbers of

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grid points matching the transform coefficients of the residual signal from the enumerated grid points, and a step that codes and outputs the serial numbers of the grid points matching the transform coefficients of the residual signal, as recited in independent claims 1 and 8. Claims 2-7 and 9 are dependent upon claims 1 and 8, and therefore are also allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- a. Multiresolution lossless/lossy compression and storage of data for efficient processing thereof; Castelli et al. (US 6141445 A)
- b. Scalable lossless audio coding/decoding apparatus and method; Kim et al. (US 7617097 B2)
- c. System and method for fine granular scalable video with selective quality enhancement; Chen et al. (US 6263022 B1)
- d. Method and apparatus for providing prediction mode fine granularity scalability; Peng et al. (US 20020126759 A1)

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- e. Video processing system using variable weights and variable transmission priorities; Jiang et al. (US 7372904 B2)
- f. Device and method for hierarchically coding/decoding images reversibly and with improved coding efficiency; Oami (US 6363119 B1)

### ***Contact***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER FINDLEY whose telephone number is (571)270-1199. The examiner can normally be reached on Monday-Friday (8:30 AM-5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on 571-272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/  
Supervisory Patent Examiner, Art Unit 2621

/Christopher Findley/